

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2001-NM-170-AD; Amendment 39-13136; AD 2003-09-07]**

**RIN 2120-AA64**

**Airworthiness Directives; McDonnell Douglas Model DC-9-10, -20, -30, -40, and -50 Series Airplanes; and DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88 Airplanes**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

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**SUMMARY:** This amendment adopts a new airworthiness directive (AD), applicable to all McDonnell Douglas transport category airplanes listed above, that requires a check of the slant pressure panels of the wheel wells of the left and right main landing gear (MLG) for water leakage, and repair of any leak found. This action is necessary to prevent the accumulation of water in the wheel wells of the MLG during flight, which could freeze on the lateral control mixer and control cables, resulting in restricted lateral control and consequent reduced controllability of the airplane. This action is intended to address the identified unsafe condition.

**DATES:** Effective June 5, 2003.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of June 5, 2003.

**ADDRESSES:** The service information referenced in this AD may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Wahib Mina, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5324; fax (562) 627-5210.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to all McDonnell Douglas Model DC-9-10, -20, -30, -40, and -50 series airplanes; and DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88 airplanes; was published in the Federal Register on November 18, 2002 (67 FR 69494). That action proposed to require a check of the slant pressure panels of the wheel wells of the left and right main landing gear (MLG) for water leakage, and repair of any leak found.

### **Explanation of New Relevant Service Information**

Since the issuance of the proposed AD, the FAA has reviewed and approved Boeing Alert Service Bulletin DC9-53A295, Revision 02, including Appendix and Evaluation Form, dated January 6, 2003. (The proposed AD refers to Boeing Alert Service Bulletin DC9-53A295, Revision 01, dated February 28, 2002, as an acceptable source of service information for accomplishment of the proposed actions.) Revision 02 of the service bulletin adds no new procedures, though it adds two airplanes to the effectivity listing. This change does not affect the applicability of this AD because, as proposed, this AD applies to all McDonnell Douglas Model DC-9-10, -20, -30, -40, and -50 series airplanes; and DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88 airplanes. Therefore, we have revised paragraph (a) of this final rule to refer to Revision 02 of the service bulletin as the appropriate source of service information for the actions in that paragraph. Also, we have revised paragraph (c) of this final rule (which was included as paragraph (b) in the proposed AD) to give credit for accomplishing the required actions before the effective date of this AD per the original issue or Revision 01 of the service bulletin.

### **Comments**

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

### **Request To Revise Leak Check Procedures**

One commenter requests that the FAA revise certain leak check procedures. Specifically, the commenter asks that we allow leak checks to be performed at 4 pound-per-square-inch gage (psig) (rather than 1 and 3 psig), allow operators to apply sealant around the entire seal before accomplishing the leak check, and allow operators to trim migrated seals within certain limits. The commenter states that the leak check at 1 psig is impractical because it is difficult to maintain differential pressure of 1 psig, and it is unreasonable to expect an operator to do this check consistently and repeatedly. The commenter states that the slant pressure panel is a "plug"-type opening that seals with increasing pressure, and most plug-type openings, such as doors, leak at 1 psig but are sealed at 3.5 to 4 psig. The commenter also states that the seals migrate over time due to flexing of the structure, and it has not noted any appreciable effect on the sealing capabilities of the slant pressure panel due to such seal migration. The commenter suggests that the referenced service bulletin be revised to incorporate the requested changes.

We partially concur with the commenter's request. We do not concur to raise the pressure threshold for the leak checks to 4 psig. We disagree that the slant pressure panel is a plug-type opening similar to a door; the slant pressure panel is intended to be pressure-tight at all times. This AD addresses an unsafe condition, the accumulation of water in the wheel wells of the MLG, that occurs due to leakage of water into the MLG wheel well when the slant pressure panel is not pressure-tight. We have determined that a leak check at 1 psig (and repairing any leak found during that check) is necessary to ensure safety and will ensure that leaks will not occur when the airplane is in service. No change to the final rule is needed in this regard.

We concur with the commenter's request to allow operators the option of applying PR-1422 sealant to the fillet seal prior to doing the leak check or trimming migrated seals within certain limits. If these actions are accomplished, they must be accomplished per a method approved by the FAA. We have added a new paragraph (b) to this final rule (and reidentified subsequent paragraphs accordingly) to include these provisions. We have also added Note 2 to this final rule (and reidentified subsequent notes accordingly) to state that application of sealant within the limits and per the procedures specified in Boeing Service Drawing 5956065 is an approved means of complying with the sealant application specified in paragraph (b) of this AD.

### **Request for Alternative Method of Compliance**

One commenter, an operator, states that, on several of its airplanes, it has had cases of water accumulation in the wheel wells of the left and right MLG due to pressurization leaks from the slant pressure panels. Repairs of such leaks were successful on a limited and temporary basis only. Based on its experience with such leaks, the commenter developed a program to refurbish slant pressure panels that involves replacing the left and right slant pressure panels, gaskets, and covers, and resealing the area. The commenter states that it will pursue an alternative method of compliance (AMOC) with the proposed AD.

The commenter makes no specific request for a change to the proposed AD. We infer that the commenter is requesting approval of an AMOC for the requirements of this AD. The commenter provides no technical data to support its request. As provided by paragraph (d) of this AD, we may approve a request for an AMOC if data are submitted to justify that the commenter's refurbishment process would provide an acceptable level of safety. No change to the final rule is needed in this regard.

### **Clarification of Compliance Time**

Paragraph (a) of the proposed AD specifies a compliance threshold of "Prior to the accumulation of 40,000 flight hours since date of manufacture." We find that it is necessary to clarify this compliance threshold in this final rule. This decision is based on our determination that "date of manufacture" may be interpreted differently by different operators. Therefore, we have revised the compliance threshold for paragraph (a) of this final rule to "Prior to the accumulation of 40,000 flight hours since the date of issuance of the original Airworthiness Certificate or the date of issuance of the Export Certificate of Airworthiness, whichever occurs first." We find that this terminology is generally understood within the industry and records will always exist that establish these dates with certainty. As a result of these changes, we have moved the compliance threshold and grace period for the actions required by paragraph (a) to subparagraphs (a)(1) and (a)(2) of this final rule.

### **Explanation of Editorial Change**

We have changed the service bulletin citation throughout this final rule to exclude the Evaluation Form attached to the service bulletin. The form is intended to be completed by operators and submitted to the airplane manufacturer to provide input on the quality of the service bulletin; however, this AD does not include such a requirement.

Also, the service bulletin citation throughout the proposed AD states "including Appendix A." First, we note that the citation should have referred to "Appendix," not "Appendix A," and we have revised all citations in this final rule accordingly. Second, the appendix of the service bulletin contains a form for reporting leak check results. As we explained in the preamble of the proposed AD, this AD does not require such reporting. Therefore, we have changed the service bulletin citation throughout this final rule to exclude the appendix.

## **Conclusion**

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

## **Cost Impact**

There are approximately 1,919 airplanes of the affected design in the worldwide fleet. The FAA estimates that 1,159 airplanes of U.S. registry will be affected by this AD, that it will take approximately 4 work hours per airplane to accomplish the required leak check, and that the average labor rate is \$60 per work hour. Based on these figures, the cost impact of the AD on U.S. operators is estimated to be \$278,160, or \$240 per airplane.

The cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

## **Regulatory Impact**

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. Section 39.13 is amended by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE

Aircraft Certification Service  
Washington, DC



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "www.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2003-09-07 McDonnell Douglas:** Amendment 39-13136. Docket 2001-NM-170-AD.

**Applicability:** All Model DC-9-14, DC-9-15, DC-9-15F, DC-9-21, DC-9-31, DC-9-32, DC-9-32 (VC-9C), DC-9-32F, DC-9-32F (C-9A, C-9B), DC-9-33F, DC-9-34, DC-9-34F, DC-9-41, DC-9-51, DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88 airplanes; certificated in any category.

**Note 1:** This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Compliance:** Required as indicated, unless accomplished previously.

To prevent the accumulation of water in the wheel wells of the left and right main landing gear (MLG) during flight, which could freeze on the lateral control mixer and control cables, resulting in restricted lateral control and consequent reduced controllability of the airplane, accomplish the following:

## **Leak Check/Repair**

(a) At the later of the compliance times specified in paragraphs (a)(1) and (a)(2) of this AD, do a check of the slant pressure panels of the wheel wells of the left and right MLG for water leakage (including pressurizing the airplane and checking the panels for leaks, depressurizing the airplane to repair leaks, and pressurizing the airplane again to verify that all leaks are repaired), per the Accomplishment Instructions of Boeing Alert Service Bulletin DC9-53A295, Revision 02, excluding Appendix and Evaluation Form, dated January 6, 2003. If any leak is found, before further flight, repair per the service bulletin. If no leak is found, no further action is required by this AD.

(1) Prior to the accumulation of 40,000 flight hours since the date of issuance of the original Airworthiness Certificate or the date of issuance of the Export Certificate of Airworthiness, whichever occurs first.

(2) Within 18 months after the effective date of this AD.

## **Optional Application of Sealant or Trimming of Migrated Seals**

(b) Prior to performing the check for water leakage specified in paragraph (a) of this AD, operators, at their option, may apply PR-1422 sealant to the fillet seal or trim migrated seals, within limits specified by and per a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA.

**Note 2:** Application of PR-1422 sealant per the procedures specified in Boeing Service Drawing 5956065 is an approved means of complying with the sealant application provision specified in paragraph (b) of this AD.

### **Credit for Actions Done per Previous Issue of Service Bulletin**

(c) Accomplishment of the check for water leakage and repair of leaks found, before the effective date of this AD, per Boeing Alert Service Bulletin DC9-53A295, excluding Appendix and Evaluation Form, dated May 8, 2001; or Revision 01, dated February 28, 2002; is acceptable for compliance with paragraph (a) of this AD.

**Note 3:** Although Boeing Alert Service Bulletins DC9-53A295, dated May 8, 2001; Revision 01, dated February 28, 2002; and Revision 02, dated January 6, 2003; recommend that operators report findings to the manufacturer after doing the initial leak check, this AD does not contain such a reporting requirement.

### **Alternative Methods of Compliance**

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

**Note 4:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

### **Special Flight Permits**

(e) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

### **Incorporation by Reference**

(f) Unless otherwise provided by this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin DC9-53A295, Revision 02, excluding Appendix and Evaluation Form, dated January 6, 2003. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

### **Effective Date**

(g) This amendment becomes effective on June 5, 2003.

Issued in Renton, Washington, on April 23, 2003.  
Ali Bahrami,  
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.  
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